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THE BEAN BAG

A newsletter to promote communication among research scientists concerned with the systematics of the Leguminosae/Fabaceae.

Number 22

Nov. 1985

From the Editors

We are preparing a Directory of Readers to be included with the May 1986 issue of the Bean Bag. This Directory will have a sort by scientific names. If your Specialty line is blank, your name will not appear in this sort. Send any corrections or additions to CRG (address below) before March 1, 1986. No changes will be made after March 15. The Directory will be printed in March (with a May date). Copies will be available at the Second International Legume Conference, St. Louis, Missouri.

The Bean Bag (BB) is designed to promote communication among research scientists concerned with legume systematics. To achieve this goal the BB is issued in May and November of each year and features six columns: From the Editors, News (meetings, major events, announcements, etc.), Corrections for last Directory, New Readers, Gleanings, and Recent Legume Literature. Data in the Gleanings column are derived from questionnaire sheets which Readers complete and return. If you have news about legume systematics, send it to us for this column. The Recent Legume Literature column contains published research papers of specific interest to BB Readers. Recent is defined as one year old. We rarely will publish a citation that is more than one year old. Specific interest to BB Readers is defined as research papers of interest to a world wide group of legume systematic botanists.

This edition was typed by Vicky Hess, who has taken Lydia Poole's position.

Editors: C.R.Gunn and J.A.Lackey.

Bean Bag address: PE and TL, Bldg. 265, BARC-East,
Beltsville, MD 20705 USA.

IN MEMORIAM

Professor John Patrick M. Brennan died on September 26, 1985.

SECOND INTERNATIONAL LEGUME CONFERENCE

The conference, entitled Biology of the Leguminosae, will be held on 23-27 June 1986 at the Missouri Botanical Garden, St. Louis, Missouri, USA. The aim of the meeting is to discuss recent advances in our understanding of the biology of legumes, gained from both field and experimental research, and covering both pure and applied points of view. The multidisciplinary approach of this conference is designed to address a wide variety of research interests and to stimulate discussion among specialists. Scheduled topics include: Life history studies; tree architecture; evolution and biology of inflorescences and pollen; floral organogenesis; ecology; ecological biogeography; pollen-stigma-style interactions; structure and function of legume fruits and seeds; mycorrhizal relationship; cyanogenesis; evolution of symbiotic genes; biological implications of genome evolution; ant-domatia, aphid-legume, tick-legume, and bruchid-legume co-evolution; biological changes induced by domestication; computerized data bases and biological research; and international legume data bases. For further information write to: Dr. James L. Zarucchi, Legume Conference Coordinator, Missouri Botanical Garden, P. O. Box 299, St. Louis, Missouri 63166, USA.

INTERNATIONAL LEGUME DATABASE & INFORMATION SERVICE (ILDIS)

Frank A. Bisby

The Inaugural Workshop for ILDIS was held at Southampton University on September 23-25. Thanks to sponsorship by the EEC and the British SERC, 35 scientists from 15 countries were present. They included advisors, representatives of participating research groups, and representatives of international agencies.

Those present agreed to start ILDIS as an autonomous, international organisation open to all. It was agreed to go ahead with the project as planned plus some modifications arising from the Workshop. It is a cooperative project in that participating research groups pool their information and retain collective control over its dissemination through an elected international board. This board was elected and has now taken over responsibility for management and ownership of the service. The board has put day-to-day running of the the project in the hands of a 3-person Executive: Dr. R.M. Polhill (K), Dr. J.L. Zarucchi (MO), and Dr. F.A. Bisby (Southampton University). Dr. Bisby will act as coordinator, providing both the secretariat and technical coordination of the activities.

ILDIS will provide an international information service for legumes. It will supply factual information on names, distribution, morphology, chemistry, agronomy, plus literature citations for the sources of this information. The service is intended for pure biologists, applied biologists, and international agencies, the full range of the scientific and administrative public. The service will be based on a database supplemented with a network of experts and contacts with plant exploration and plant breeding organisations. It is planned to make an enquiry service freely available in developing countries, as well as to provide an experimental on-line database service with BIOSIS. As with all database projects, there will be a considerable investment of resources before the first products become available, and the first parts of the ILDIS service will not become available before 1988.

The database will contain a backbone of basic information about all legumes and a range of further information about plants in certain tribes. The backbone will consist of annotated checklists of all accepted species and genera with geographical distributions and literature citations. The further information will initially be brief morphological data about species in certain tribes selected primarily for their economic importance, but this will gradually be extended to include chemical, ecological and agronomic data, and to include more and more tribes. The data will be pooled in the system by a network of 5 centres working on the checklist, 16 centres working on particular tribes or subtribes, and subsequently other centres specialising in particular classes of data or in germplasm information.

A detailed presentation of the project will be given at the Second International Legume Conference at St. Louis. Anyone interested in receiving information about ILDIS or in possible participation is invited to contact a member of the Executive.

INTERNATIONAL FOOD LEGUME RESEARCH CONFERENCE

The IFLRC on pea, lentil, fababean, and chickpea will be held 6-11 July 1986 at the Sheraton Hotel, Spokane, Washington, USA. Registration, programs, lodging, meals, and transportation information can be obtained from: Dr. R. H. Lockerman, Chairman, IFLRC, Plant and Soil Science Department, Montana State University, Bozeman, Montana 59717-0002 USA.

Asemente

Jose Maria de Albuquerque

Quando vejo uma semente pequenina,
Qualquer uma, de feijão, trigo ou baunilha,
Imagino, admirado, a maravilha
Do poder, que a Divindade lhe destina

Microcosmo bem oculto, em tegumento;
Cada parte com função mui definida;
O embrião contém em si toda uma vida,
Sendo o albume sua reserva de alimento.

Como e belo a gente ver a natureza,
Sem desçanço prosseguir no rumo certo!
Uma simples sementinha da a certeza.

Da divina Providência do bom Deus,
Que alimenta o mundo inteiro, e esta bem perto,
Toda vez que O solicitamos filhos seus.

The Seed

Jose Maria de Albuquerque

(Translation: Barbara Ann Robertson)

When I gaze upon a tiny seed
Any one, bean, wheat or vanilla,
I wonder, in awe, at the marvel
Of the power which Divinity has destined.

Hidden microcosm, in tegument,
Each part with a function already defined;
The embryo contains in itself an entire life
Being the albumen the nutritious reserve.

How lovely to see nature,
Without rest, proceed on the correct path!
And a simple seed reassures us of the certainty.

Of the Divine Providence of the Good Lord,
Who feeds the entire world, and is always near
When called upon by his children.

Der Same

Jose Marie de Albuquerque

(Translation: Susanne Renner)

Wenn ich einen kleinen Samen sehe,
sei es der der Bohne, der des Weizens oder der Vanille,
stelle ich mir voll Staunen das Wunder
des Entwicklungsvermoegens vor, welches Gott ihm bestimmt hat.

Gut verborgener Mikrokosmos in der Samenschale;
Jedes Teil mit seiner ganz bestimmten Funktion;
Der Embryo birgt ein ganzes Leben in sich,
und das Albumen ist seine Nahrungsreserve.

Wie schoen ist es, die Natur zu betrachten,
ohne Halt auf dem richtigen Weg weiterzumachen!
Ein einfacher Same gibt uns die Gewissheit,

der goettlichen Vorsehung,
die die ganze Welt ernaeht und ganz nah ist,
wenn Gottes Kinder ihn anrufen.

INTERNATIONAL ORGANIZATION OF PLANT BIOSYSTEMATISTS

The International Organization of Plant Biosystematists held and Open Meeting at the University of Sussex, Brighton, England, during the Third International Congress of Systematic & Evolutionary Biology. Items of general interest are: Dr. Krystyna Urbanska reported that plans were well advanced for the 1986 IOPB Symposium in Zurich (Differentiation Patterns in Higher Plants, July 13-18, 1986). Information may be obtained from Dr. K. Urbanska, Geobotanisches Institut, ETH Stiftung Rubel, 38 Zurichbergstrasse, CH-8044 Zurich, Switzerland. An invitation has been received from Dr. Ichiro Fukuda to hold the next IOPB Symposium in Japan with a tentative title "The Origin and Evolution of Wild and Cultivated Plants." (Date to be determined.) IOPB Newsletter No. 4, has just been distributed to members. Dr. Urbanska, Editor of the IOPB Newsletter, welcomes contributions. Membership in IOPB may be obtained by writing to the Secretary-Treasurer, Dr. Liv Borgen, Botanical Garden and Museum, Trondheimsveien 23B, Oslo 5, Norway, and enclosing a money order for U.S. \$25.00, made payable to the International Organization of Plant Biosystematists. Membership is for the period 1983-1987. Back issues of the IOPB Newsletter will be sent to new members.

SPECIAL CORRECTION

TINDALE has asked that the following correction be made in Directory. She is not studying pseudoracemes and fascicles of Australian Psoralea. Please make this corrections.

CORRECTIONS TO MAY 1985 DIRECTORY

Breneau. Correct spelling: Bruneau

Delbos. New Address: I.B.E.A.S., Campus Universitaire, Avenue de l'Universite, 64000 Pau, France

Gonzales. New address: Universidad La Salle, Calle 11 1-69, Apartado Aereo 27389, Bogata, Colombia

Hahn. New address: L. H. Bailey Hortorium, 467 Mann Library, Cornell University, Ithaca, New York 14853-0271 USA

Kanis. Altered address: Australian National Herbarium (CSIRO), GPO 1600, Canberra, A. C. T. 2601 Australia

Lewis. Zip code change: TW9 3AE

Librarian. Drop last entry on page 20

Library. Address change for first entry on page 22: Economic Botany Library, Harvard University Herbaria, 22 Divinity Ave., Cambridge, Massachusetts 02138 USA

Miller. Change: SDA Forest Service to USDA Forest Service, Forest Products Laboratory

Misra. New Address: Biology Department, Atlanta University, P. O. Box 372, Atlanta, Georgia 30314 USA

Pillay. New Address: 3550 Nicholson Drive, Apt. 1122, Baton Rouge, Louisiana 70802 USA

Rangogga. Correct spelling: Rangagga. Add to address: P. O. Box 453

Rico-Arce. New Address: Department of Biology, Bldg. 44, University of Southampton, Southampton SO9 5NH United Kingdom

Rosental. Add: 101 T. H. Morgan Bldg.

Schirf. New Address: Botanical Research Institute, Private Bag X101, Pretoria 0001, South Africa

Schroder. Correct spelling: Schröder

St. John. Correct zip code: 96817

Stritch, Dr. Lawrence R. New address: Natural Heritage Biologist, Illinois Department of Conservation, P.O. Box 477, Pittsfield, Illinois 62363 USA

Turner. Insert before street address: Federal Bldg FB-44

Vijay Kumar. New Address: H No. 9.4.86/191, Salarjung Colony, Hyderabad 500 008, India

White. J. W. New Address: CIAT, Apt. Aereo 6713, Cali, Colombia

Yu. Correct spelling: Yü

ADDITIONS TO MAY 1985 DIRECTORY

Agullo, Lic. María Aurora.
Lab. Plantas Vasculares (75). Facultad de Ciencias Exactas y Naturales. Pab. II, 4 piso, Ciudad Universitaria, 1428 Buenos Aires, Argentina
(PHASEOLUS, VIGNA, CASSIA)

Ainouche, Mr. Abdel-Prader
Laboratoire de'Eco-Genetique, Institut de Biologie, USTHB-Bab Ezzouar, Alger, Algeria
(LUPINUS, MEDICAGO, HEDYSARUM)

Aryavand, Dr. A.
Dept. of Biology, San Diego State University, San Diego, California 92182 USA
FABACEAE (CENTRAL IRAN)

Bonet, Arturo
Instituto de Ecologia; Apartado Postal 18-845, 11800 Mexico, D. F., Mexico
FABACEAE (BRUCHIDAE-PHASEOLINAE INTERACTION)

Blackmon, William J.
Plant Pathology & Crop Physiology, 302 Life Sciences Bldg., Louisiana State
University, Baton Rouge, Louisiana 70803 USA
APIOS AMERICANA, A. PRICEANA

Cordeiro, Lázara
Instituto de Biociências, Universidade Estadual Paulista "Julio de Mesquita
Filho", Cx. Postal 178, Rio Claro, Sao Paulo, Brazil
FABACEAE (NITROGEN PRODUCTION BY TREES)

Cornell, Mr. Sid
P. O. Box 9, San Diego, California 92112 USA
PHASEOLEAE

Crisp, Michael D.
Australian National Botanic Gardens, G.P.O. Box 158, Canberra, A.C.T. 2601,
Australia

Fantz, Dr. Paul R.
KI-130 Dept. of Horticultural Science, SALS, North Carolina State University,
Box 7609 Raleigh, North Carolina 27696-7609 USA

Hernandez, Mr. Hector M.
Missouri Botanical Garden, P. O. Box 299, St. Louis, Missouri 63166-0299 USA
INGEAE

Hoc, Lic. Patricia Susana.
Lab. Plantas Vasculares (11). Facultad de Ciencias Exactas y Naturales,
Pab. II, 4 piso, Ciudad Universitaria, 1428 Buenos Aires, Argentina
INGA, CALLIANDRA, ENTEROLOBIUM, ALBIZIA (ARGENTINA)

Husaini, Dr. S. W. H.
Department of Botany, University of Benin, P.O. Box 2771, Benin City, Nigeria
FABACEAE (TREES OF NIGERIA)

Ibrahim, Faridah Hanum
Botany Dept., Plant Science Laboratory, University of Reading, Whiteknights,
Berks RG6 2AS United Kingdom
ORMOSIA (ASIA)

Jurzysta, Dr. Marian
Instytut Uprawy Nawożenia i Gleboznawstwa, 24-100 Pulawy, Poland
TRIFOLIEAE (CHEMOTAXONOMY)

Knettle, Mr. John
Voluntario del Cuerpo de Paz, Gta Avenida, 1-46, Zona 2, Guatemala City,
Guatemala
FABACEAE (CROPS).

Kummerow, Dr. Jochen
Department of Biology, San Diego State University, San Diego, California
92182 USA
FABACEAE (NITROGEN FIXATION)

Maxtel, Mr. Nigel
Department of Biology, Bldg. 44, University of Southampton, Southampton S09
5NH United Kingdom
VICIEAE

Mlyniec, Dr. Waleria
Polish Academy of Sciences, Institute of Plant Genetics, ul. Nowy Swait 72
00-330 Warszawa, Poland
VICIA (BREEDING)

Niyomdham, Dr. Chawalit
The Forest Herbarium, Royal Forest Department, Bangkok 9, Thailand

Potter, Mr. Daniel
Bailey Hortorium, 467 Mann Library, Cornell University, Ithaca, N. Y.
14853-0271 USA
SPHENOSTYLIS STENOCARPA

Sevillano, María del C. M.
Facultad de Agronomía Universidad de Buenos Aires, Ave. San Martín 4453, 1417
Buenos Aires, Argentina
PHASEOLUS, VULGARIS (CULTIVARS)

Styles, Dr. Brian
Department Plant Sciences, Oxford Forestry Institute, South Parks Road,
Oxford, United Kingdom

Te-lin, Dr. Wu
Department of Plant Taxonomy, South China Institute Botany, Academia Science,
Kwangchow, China

Zallocchi, Lic. Enrique
Lab. Plantas Vasculares (75). Facultad de Ciencias Exactas y Naturales.
Pab. II, 4 piso. Ciudad Universitaria, 1428 Buenos Aires, Argentina
VIGNA, PHASEOLUS, MACROPTILIUM, PROSOPIS.

GLEANINGS

ALBUQUERQUE is completing his dissertation on the identification and germination of seeds of Amazonian weed and forest trees. Needs data on the identification and germination of legume seeds and offers legume seeds from Brazil.

ARYAVAND (new Reader) is studying the ecology of legumes in the deserts of central Iran.

ARAMBARRI has in press "Seed morphology and anatomy of seven American species of Lotus," continues her study of Old World species, and plans to continue study of other American species. Needs small samples of seeds of American Lotus spp. offers seeds of Albizia julibrissin, Cercis siliquastrum, Gleditsia amorphoides, G. triacanthos, Parapiptadenia rigida, Robinia pseudoacacia.

BIRCH offers small quantities of bruchid-resistant *Vigna* and *Phaseolus* seeds. With M. Simmonds is completing research on chemical resistance factors to bruchids in wild and cultivated legumes.

BLACKMON (new Reader) is evaluating *Apios americana* as a crop and conducting tissue culture and field studies. Needs seeds and tubers and offers seeds and tubers of *A. americana* from Louisiana.

CANE is continuing to study bee pollination of *Lespedeza cuneata*.

COWAN retired September 30, 1985. Will continue to receive mail at the Smithsonian address. Is now in Australia.

CRISP is studying generic limits and relationships of tribe Mirbelieae and relationship to other tribes. The first stage was a cladistic analysis of genera of Mirbelieae, Bossiaeeae, and Brongniartieae, using traditional and some new characters. Paper to be published in *Advances in Legume Systematics*, volume 2. Next will be study of seeds and seedlings of the named tribes. Need duplicate herbarium specimens of South African, Central American, and South American papilionoides. Offers duplicates of Australian legumes, especially temperate taxa.

DELBOS organized the First International Colloquium on *Lathyrus* at Pau, September 9-13, 1985. Is using tissue culture in a study of cytogenetics of *Lathyrus latifolius*, *L. sylvestris*, *L. tuberosus*. Offers local material of same.

GILL completed germination study of *Acacia farnesiana* and needs seeds of typical and temperature legumes.

GONZALEZ-PATINO (corrected address) is working with *Ormosia*. (See IBRAHIM.)

HAHN (new address) is studying the Mimosoideae of Paraguay.

HERINGER is studying uses of *Hymenaea* and *Dipteryx alata* seeds as food for cattle. Needs *Ormosia* seeds and offers *Hymenaea courbaril*, *H. maritima*, *Dimorphandra mollis*, *Dipteryx alata*, and *Pterodon pubescens*.

HUGHES continues tree legume germplasm collections from Mexico, Central and South America particularly in the genera *Gliricidia*, *Leucaena*, *Parkinsonia*, *Prosopis* and *Albizia*. Offers seeds of economically important woody legumes.

HUSAINI (new Reader) is surveying (in the field) legume trees of Nigeria. Needs seeds of tropical legumes.

IBRAHIM (new Reader) is monographing the Asian species of *Ormosia*. Needs viable seeds of Asian *Ormosia* spp. (See GONZALES-PATINO.)

ISELY is completing the Leguminosae for the Vascular Flora of Southeastern United States, sponsored by the University of North Carolina.

KARATELA needs and offers seeds of Indigofera.

KINGHORN needs legumes that taste sweet, for project on intensely sweet compounds of plant origin.

KUMMERON is assessing fixation by annual and perennial legumes in early post-fire chaparral, and estimating the nitrogen contribution by these legumes to the nitrogen balance of the chaparral.

LERSTEN is studying the phloem-xylem relationships in vein endings of selected legume taxa.

MAXTED (new Reader) is revising *Vicia* subgenus *Vicia* using database techniques. Needs seeds of any Viciaeae species. Offers seeds of Viciaeae species from the Viciaeae Database Project.

MISSET needs seeds of *Ulex argenteus* subsp. *argenteus*, *U. erinaceus*, *U. densus*, *U. micranthus*, *U. pariflorus* subsp. *jussiae* from Portugal for biochemical studies.

OKOLO is conducting aeropalynology studies in Nigeria. Needs pollen, fruit, and seeds of *Cicer* and *Vicia* and publications on aeropalynology. Offers vegetative and floral parts and pollen preparations of tropical African legumes.

PLITMANN needs seeds of *Lathyrus cicera*, *L. sativa*, *L. pseudocicera* and African and South American *Lupinus* spp. Offers seeds and herbarium specimens of Middle East *Lupinus* spp.

POTTER (new Reader) is working on *Sphenostylis stenocarpa* and related species. Needs viable seeds of above and offers seeds from a Nigerian collecting trip planned for January, 1986.

RANGAPPA (new Reader) is studying effects of air pollutants on *Phaseolus vulgaris*.

RICO-ARCE (new address) is working with VASSAL on *Acacia* for Flora Neotropica; *Acacia*, *Albizia*, and *Pithecellobium* for Flora of Nicaragua; and phenetic and evolutionary patterns in Ingeae. Needs and will annotate herbarium sheets (send to (BM) address) and seeds of *Acacia*, *Albizia*, and *Pithecellobium*.

SAINT-MARTIN studying testa topography and phytodermology of *Ononis* and species of the Sophoreae. Needs seeds of the same.

SEVILLANO (new Reader) is conserving cultivars of *Phaseolus vulgaris* of northwest Argentina.

STANKEVICH is working on *Lathyrus* taxonomy and karyotypes. Needs *Lathyrus* seeds and offers reprints in exchange.

STRITCH (new address) received his Ph.D.

STYLES (new Reader) is collecting dry zone seeds of multipurpose legume trees of Latin America. Offers Latin American genera.

TEN-LIN is compiling data on Mimosoideae and Phaseoleae for the "Flora Reipublicae Popularis Sinicae."

THOTHATHRI is revising Galegeae of India and studying legume seed coat morphology, using SEM. Needs seeds of Asiatic species of Hedysareae and Crotalaricae.

ULIBARRI has started studies of *Caesalpinia* of South America and for "Flora del Paraguay" and Leguminosae for "Flora del la Prov. San Juan, Argentina." Needs *Caesalpinia* and *Hoffmannseggia*. Offers Argentine legumes.

VASSAL. See RICO-ARCE

VERDCOURT continues with the Rubiaceae for "Flora Zambesiaca" and "Flora of Tropical East Africa", but end is in sight. A monograph of *Mucuna* is being considered. Initial work has been completed on East African, New Guinean, and Australian species. Wilmot-Deane revised Chinese spp., Wiridiniata revised Flora Malesiana spp., and WINDLER will study American spp. The Indian spp. are being reviewed at (K).

WHITE (J.) is studying heat and drought tolerance of *Phaseolus vulgaris*. Offers lines of *P. vulgaris* bred for earliness and drought and heat tolerance.

WINDLER. See VERDCOURT.

WOJCIECHOWSKA is studying the self-incompatible faboid populations: The percent of ovules versus the number in the ovary that form seeds. These data will be compared to autogamous spp., which set high percentage of seeds. Attention must be paid to the fact that many cross-pollinated populations are more or less self-compatible, and in these cases seeds set in pods may be even the same as in autogamous plants. Preliminary report on this topic has been published in "Proceedings of the 8th International Symposium on Sexual Reproduction in Seed Plants, Ferns, and Mosses", 20-24 August, 1984 Wageningen, the Netherlands p. 93-95. Another publication, with full particulars, will be published in *Roczniki Akademii Rolniczej w Poznaniu*, with plates both in Polish and English. To confirm this hypothesis, populations with more species than I have examined should be studied.

RECENT LEGUME LITERATURE

[Ed. Note: Author names in all capital letters are Bean Bag Readers. Their full names and addresses are in the May 1984 Directory or November 1984 update. Correspondence about articles should be sent to them.]

BARNEBY. 1985. The identity and synonymy of *Acacia guilandinae*, *Mimosa obovata*, *M. pseudo-obovata*, and *M. laticifera* (Mimosaceae). *Brittonia* 37 (1): 85-87.

Berti, F. 1985. Synthèse de travaux réalisés sur *Phaseolus* ou Zaire ou Rwanda et ou Rurundi de 1945 à nos jours. C.I.A.T., Centre d'Information sur le Haricot (Colombie), 54 pp.

BIRCH. 1985. Field evaluation of resistance to black bean aphid, *Aphis fabae*, in close relatives of the faba-bean, *Vicia faba*. *Ann. Appl. Biol.* 106: 561-569.

BIRCH, M. T. Tithecott, and BISBY. 1985. *Vicia johannis* and wild relatives of the faba-bean: A taxonomic study. *Econ. Bot.* 39(2): 177-190.

- CARDENAS and RODRIGUES-CARRASQUERO. 1984. Dos especies nuevas de los generos *Enterlobium* y *Albizia* (Leguminosae-Mimosoideae). *Ernstia* 21: 1-8.
- Chaturvedi, A. and BAHADUR. 1984. Floral biology of *Dichrostachys cinerea* W. & A. (Mimosae). *Rec. Adv. Pollen Res.*, 341-348. pp. Allied Publishers, New Delhi.
- CRISP. 1984. Notes on *Daviesia* and *Jacksonia* (Leguminosae: Papilionoideae) for the flora of the Perth region. *Nuytsia* 5: 159-170.
- CRISP. 1985. Conservation of the genus *Daviesia*. *Austral. Natl. Bot. Gard. Occas. Publ.* 6: 1-33. [Copies available free from Librarian, Australian National Botanic Gardens, GPO Box 158, Canberra A.C.T. 2601, Australia.]
- DEVINE. 1985. Nodulation of soybean plant introduction lines with the fast-growing rhizobial strain USDA 205. *Crop Sci.* 25: 354-356.
- Foote, B. A. 1985. Biology of *Rivellia pallida* (Diptera, Platystomatidae): A consumer of the nitrogen-fixing root nodules of *Amphicarpa bracteata* (Leguminosae). *Jour. Kansas Entomol. Soc.* 58(1): 27-35.
- FORTUNE-HOPKINS. 1984. Floral biology and pollination ecology of the neotropical species of *Parkia*. *Jour. Ecol.* 72:1-23.
- FORTUNE-HOPKINS and M. J. G. Hopkins. 1983. Fruit and seed biology of the neotropical species of *Parkia*. In S. L. Sutton, T. C. Whitmore, and A. C. Chadwick, eds. *Tropical Rain Forest: Ecology and Management*. pp. 197-209. Blackwell Scientific Publications, Oxford
- FORTUNE-HOPKINS and F. White. 1984. The ecology and chorology of *Parkia* in Africa. *Bull. Jard. Bot. Nat.* 54 (1-2): 235-266.
- Friis, I. 1984. *Sciaplea* is a synonym of *Dialium* (Fabaceae). *Taxon* 33(3): 505-506.
- Holt, J. and BIRCH. 1984. Taxonomy, evolution, and domestication of *Vicia* in relation to aphid resistance. *Ann. Appl. Biol.* 105: 547-556.
- Hong, De Yuan, 1984. Chromosomes of six fabaceous species from Baoxing County, Sichuan Province. *Acta Phytotaxonomica* 22 (4): 301-305
- Hossaert, M., DELBOS, D. Combes. 1985. Interest agronomique de quelques *Lathyrus*. Les gesses pour l'alimentation humaine. *C. R. Acad. Agr. France* 71 (1): 65-72.
- ISELY. 1984. Leguminosae and genera *Cassia*, *Senna* in Florida. *Proc. Fourth Ann. Menninger Flowering Tree Conference 1983*, 4:12-27.
- ISELY and F. J. Peabody. 1984. *Robinia* (Leguminosae: Papilionoideae). *Castanea* 49: 187-202.
- KINGHORN and Balandrin, M. F. 1984. Quinolizidine alkaloids of the Leguminosae: Structural types, analysis, chemotaxonomy, and biological activities. In S. W. Pelletier, ed., *Alkaloids, chemical and biological perspectives*, vol. 2, pp. 105-148. John Wiley & Sons, New York.

- Lassetter, J. S. 1984. Taxonomy of the *Vicia ludoviciana* complex (Leguminosae). *Rhodora* 86: 475-505.
- LEWIS. 1984. Plants in peril, 3: *Strongylodon macrobotrys*. *Kew Mag.* 1(4): 188-190.
- LEWIS. 1985. Searching for legumes in the raatinga, south-eastern Piant, Brazil. *Kew Mag.* 2(1): 214-225.
- MAXTED. 1985. Inter- and intra-generic relationships between *Psophocarpus* species and their allies. M. Phil. Thesis, University of Southampton.
- Narsaiah, G. 1984. Handedness in twining plants with reference to *Psophocarpus tetragonolobus* (L.) DC. and *Dioscorea alata* L. in relation to yield. Ph.D. Thesis. Kakateya University, Warangel, India. [26 families, 99 genera, 28 species. Fabaceae represented by 25 genera and 55 species.]
- Narsaiah, G. and BAHADUR, B. 1984. Twining handedness in flowering plants. *Indian J. Bot.*, 7: 41-47. [Deals with various aspects of legumes].
- Narsaiah, G., BAHADUR, and Chaturvedi, 1984. A note on epidermal features in Jackbean (Fabaceae). *Jour. Indian Bot. Soc.*, 63: 437-438.
- NIELSEN, BARETTA-KUIPERS, GUINET. 1984. The genus *Archidendron* (Leguminosae, Mimosoideae). *Opera Bot.* 76: 1-120.
- Norman, E. M. and GUNN. 1985. *Pachecoa prismatica* (Fabaceae): Taxonomy and phylogeny. *Brittonia* 37(1): 78-84.
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